



# FORM PTO-1449

## INFORMATION DISCLOSURE CITATION

Atty Docket  
LU 6079 (US)

Serial No.  
10/539,342

Applicant  
Shahram Mihan et al.

Filing Date  
June 16, 2005

Group Art Unit  
1713

### U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
<i>M</i>	AA	3,125,547	03/17/64	Blatz	260	45.5	
	AB	3,242,150	03/22/66	Scoggin			
	AC	3,248,179	04/26/66	Norwood			
<i>R</i>	AD	5,246,783	09/21/93	Spenadel et al.	428	461	
<i>R</i>	AE	5,281,679	01/25/94	Jejelowo et al.	526	114	
<i>R</i>	AF	5,625,016	04/29/97	Schiffino et al.	526	114	
	AG	6,240,507	05/29/01	Derriek et al.			
<i>M</i>	AH	6,350,814	02/26/02	Bauer et al.	525	191	
<i>M</i>	AI	6,420,507	07/16/02	Kale et al.	526	348	
	AJ	6,588,905	07/08/03	Sekine			
<i>R</i>	AK	6,642,313	11/04/03	Kazakov et al.	525	191	
<i>R</i>	AL	6,699,948	03/02/04	Mihan et al.	526	161	
<i>M</i>	AM	6,723,675	04/20/04	Wang	502	103	
	AN	6,737,130	05/18/04	Ferri	428	35.2	
<i>R</i>	AO	6,787,498	09/07/04	Mihan et al.	502	120	
<i>R</i>	AP	6,812,185	11/02/04	Fischer et al.	502	120	
<i>R</i>	AQ	6,838,563	01/04/05	Mihan et al.	546	10	
<i>R</i>	AR	6,911,516	06/28/05	Mihan et al.	526	348	
<i>R</i>	AS	6,919,412	07/19/05	Mihan et al.	526	127	
<i>R</i>	AT	6,924,248	08/02/05	Mihan et al.	502	132	
<i>R</i>	AU	7,094,724	08/22/06	Fraaije et al.	502	150	
<i>R</i>	AV	2003/0036658 (corresponds to US 6,699,948; US 6,919,412)	02/20/03	Mihan et al.			
<i>R</i>	AW	2003/0036662 (corresponds to US 6,787,498; US 6,919,412)	02/20/03	Mihan et al.			
<i>R</i>	AX	2003/0055267 (corresponds to US 6,838,563; US 6,919,412)	03/20/03	Mihan et al.			
<i>R</i>	AY	2003/0176275 (corresponds to US 7,094,724)	09/18/03	Fraaije et al.			
<i>R</i>	AZ	2003/0236164 (corresponds to US 6,812,185; US 6,588,905)	12/25/03	Fischer et al.			

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January 02, 2008

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U.S. PATENT DOCUMENTS							
Examiner Initial	Class	Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
	BA	2004/0033890 (corresponds to US 6,924,248)	02/19/04	Mihan et al.			
	BB	2005/0282979	12/22/05	Mihan et al.			

  

FOREIGN PATENT DOCUMENTS							
	Class	Document Number	Date	Country	Class	Sub-Class	Translation
	BC	19745047 (corresponds to US 6,350,814)	04/15/99	DE			
	BD	100,843	02/22/84	EP			
	BE	416,815	03/13/91	EP			
	BF	420,436	04/03/91	EP			
	BG	608,369	08/03/94	EP			
	BH	662,989	07/19/95	EP			
	BI	728,160	08/28/96	EP			
	BJ	899,278	03/03/99	EP			
	BK	90/03414	04/05/90	WO			
	BL	91/09882	07/11/91	WO			
	BM	93/03093	02/18/93	WO			
	BN	93/12151	06/24/93	WO			
	BO	95/27005	10/12/95	WO			
	BP	98/03559	01/29/98	WO			
	BQ	98/44011	10/08/98	WO			
	BR	01/12687 (corresponds to US 6,911,516)	02/22/01	WO			
	BS	01/96417 (corresponds to US 6,924,248; US 2004/0033890)	12/20/01	WO			
	BT	2004/056481	07/08/04	WO			
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	BV	S. Arndt, "Alkyl Complexes of Rare-Earth Metals That Contain a Furyl-Functionalized Cyclopentadienyl Ligand: Alkyl Cation Formation and Unexpected Ring-Opening Reaction of the Furyl Group." <i>Organometallics</i> , Vol. 22, p. 775-781 (2003)	

  

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CA	S. Pang et al., "Size-Exclusion Chromatographic Assessment of Long-Chain Branch Frequency in Polyethylenes," <u>Chromatography of Polymers</u> , ACS Symposium Series 521, edited by Theodore Provder, p. 254-269 (1993)
CB	L. Wild, "Temperature Rising Elution Fractionation," <u>Advances in Polymer Science</u> 98, p. 1-47 (1999)
CC	B. Monrabal, "Crystallization Analysis Fractionation: A New Technique for the Analysis of Branching Distribution in Polyolefins," <u>J. of Applied Polymer Science</u> , Vol. 52, p. 491-499 (1994)
CD	M. Enders et al., "New Chromium (III) Complexes as Highly Active Catalysts for Olefin Polymerization," <u>Organometallics</u> , Vol. 20(24), p. 5005-5007 (2001) XP-001112032
CE	S. Bradley et al., "Synthesis and Structure of Amino-Functionalized Cyclopentadienyl Vanadium Complexes and Evaluation of Their Butadiene Polymerization Behavior," <u>Organometallics</u> , Vol. 21(16), p. 3443-3453 (2002)
CF	G. Kraus et al., "A Method for Characterization of Long-Chain Branched Polymers by GPC and Intrinsic Viscosity," <u>J. Polymer Sci.: Symposium No. 43</u> , p. 329-343 (1973)
CG	M. Pollard et al., "Observation of Chain Branching in Polyethylene in the Solid State and Melt via <sup>13</sup> C NMR Spectroscopy and Melt NMR Relaxation Time Measurements," <u>Macromolecules</u> , Vol. 37(3), p. 813,825 (2004)
CH	R. Koopmans, "Extrudate Swell of High Density Polyethylene. Part I: Aspects of Molecular Structure and Rheological Characterization Methods," <u>Polymer Engineering and Science</u> , Vol. 32(23), p. 1741-1749 (1992)
CI	J. Vega et al., "Small-Amplitude Oscillatory Shear Flow Measurements as a Tool To Detect Very Low Amounts of Long Chain Branching in Polyethylenes," <u>Macromolecules</u> , Vol. 31(11), p. 3639-3647 (1998)
CJ	P. Wood-Adams et al., "Effect of Molecular Structure on the Linear Viscoelastic Behavior of Polyethylene," <u>Macromolecules</u> , Vol. 33(20), p. 7489-7499 (2000)
CK	C. Piel et al., "Structure-Property Relationships of Linear and Long-Chain Branched Metallocene High-Density Polyethylenes Characterized by Shear Rheology and SEC-MALLS," <u>Macromolecular Chemistry and Physics</u> , Vol. 207, p. 26-38 (2006)
CL	W. Kaminsky et al., "Polymerization of Ethene and Longer Chained Olefins by Metallocene Catalysis," <u>Macromol. Symp.</u> , Vol. 226, p. 25-34 (2005)
CM	K. Klimke et al., "Optimisation and Application of Polyolefin Branch Quantification by Melt-State <sup>13</sup> C NMR Spectroscopy," <u>Macromol. Chem. Phys.</u> , Vol. 207, p. 382-395 (2006)
CN	S. Bin Wadud et al., "Shear and extensional rheology of sparsely branched metallocene-catalyzed polyethylenes," <u>J. Rheol.</u> , Vol. 44(5), p. 1151-1167 (2000)
CO	D. Yan et al., "Effect of long chain branching on rheological properties of metallocene polyethylene," <u>Polymer</u> , Vol. 40, p. 1737-1744 (1999)

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F	DA		F. Stadler et al., "Influence of type and content of very long comonomers on long-chain branching of ethene- $\alpha$ -olefin copolymers," <u>Macromolecules</u> , Vol. 39(4), p. 1474-1500 (2006)
J	DB		J. Janzen et al., "Diagnosing long-chain branching in polyethylenes," <u>Journal of Molecular Structure</u> , Vol. 485-486, p. 569-584 (1999)
C	DC		C. Gabriel et al., "Analytical and rheological characterization of long-chain branched metallocene-catalyzed ethylene homopolymers," <u>Polymer</u> , Vol. 43, p. 6383-6390 (2002)
B	DD		B. Zimm et al., "The Dimension of Chain Molecules Containing Branches and Rings," <u>The Journal of Chemical Physics</u> , Vol. 17(12), p. 1301-1314 (1949)
H	DE		H. Barth et al., <u>Modern Methods of Polymer Characterization</u> , Chemical Analysis, Vol. 113, New York: Wiley (1991); Table of Contents
H	DF		Hadjichristidis et al., "Well-Defined, Model Long Chain Branched Polyethylene. 1. Synthesis and Characterization," <u>Macromolecules</u> , Vol. 33(7), p. 2424-2436 (2000)
E	DG		E. Kokko et al., "Long-Chain Branched Polyethylene via Metallocene-Catalysis: Comparison of Catalysts," Contribution in <u>Organometallic Catalysts and Olefin Polymerization</u> by R. Blom et al., p. 335-345 (2001)
J	DH		J. Stange et al., "Rheological behavior of blends from a linear and a long-chain branched polypropylene," <u>J. Rheol.</u> , Vol. 49(5), p. 1059-1079 (2005)
H	DI		H. Münstedt et al., "Rheological measuring techniques and their relevance for the molecular characterization of polymers," <u>J. Non-Newtonian Fluid Mech.</u> , Vol. 128, p. 1-8 (2005)
T	DJ		T. McLeish et al., "Molecular constitutive equations for a class of branched polymer: The pom-pom polymer," <u>J. Rheol.</u> , Vol. 42(1), p. 81-110 (1998)
I	DK		I. Vittorias et al., "Detection and quantification of industrial polyethylene branching topologies via Fourier-transform rheology, NMR and simulation using the Pom-pom model," <u>Rheol. Acta</u> , Vol. 46, p. 321-340 (2007)
E	DL		E. van Ruymbeke et al., "A sensitive method to detect very low levels of long chain branching from the molar mass distribution and linear viscoelastic response," <u>J. Rheol.</u> , Vol. 49(6), p. 1-18 (2005)
S	DM		S. Trinkle et al., "Van Gorp-Palmen Plot II-classification of long chain branched polymers by their topology," <u>Rheol Acta</u> , Vol. 41, p. 103-113 (2002)
D	DN		D. Lohse et al., "Well-Defined, Model Long Chain Branched Polyethylene. 2. Melt Rheological Behavior," <u>Macromolecules</u> , Vol. 35(8), p. 3066-3075 (2002)
C	DO		C. Gabriel et al., "Influence of long-chain branches in polyethylenes on linear viscoelastic flow properties in shear," <u>Rheol Acta</u> , Vol. 41, p. 232-244 (2002)
B	DP		B. Bersted et al., "Prediction of Rheological Behavior of Branched Polyethylene from Molecular Structure," <u>Journal of Applied Polymer Science</u> , Vol. 26, p. 1001-1014 (1981)

  

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	EA	B. Bersted, "On the Effects of Very Low Levels of Long Chain Branching on Rheological Behavior in Polyethylene," <u>J. of Applied Polymer Science</u> , Vol. 30, p. 3751-3765 (1985)
	EB	H. Park et al., "Influence of long-chain branching on time-pressure and time-temperature shift factors for polystyrene and polyethylene," <u>Rheol Acta</u> , Vol. 46, p. 153-159 (2006)
	EC	C. Gabriel et al., "Influence of molecular structure on rheological properties of polyethylenes," <u>Rheol Acta</u> , Vol. 37, p. 7-20 (1998)
	ED	G. Schlatter et al., "Fourier Transform Rheology of Branched Polyethylene: Experiments and Models for Assessing the Macromolecular Architecture," <u>Macromolecules</u> , Vol. 38, p. 6492-6544 (2005)
	EE	H. Münstedt et al., "Influence of molecular structure on rheological properties of polyethylenes; Part II. Elongational behavior," <u>Rheol Acta</u> , Vol. 37, p. 21-29 (1998)
	EF	I. Vittorias et al., "Detection of Long-Chain Branching in Polyolefins via Fourier-Transform Rheology and Finite Element Simulations," <u>Macromol. Mat. Eng.</u> , p. 115-120 (2007)
	EG	G. Georgiou, "Stick-Slip Instability," <u>Polymer Processing Instabilities</u> edited by S. Hatzikiriakos & S. Migler, Dekker, NY, p. 161-206 (2005)
	EH	S. Wang et al., "Exploring molecular origins of sharkskin, partial slip, and slope change in flow curves of linear low density polyethylene," <u>J. Rheol.</u> , Vol. 40(5), p. 875-898 (1996)
	EI	S. Wang et al., "Stick-slip transition in capillary flow of linear polyethylene: 3. Surface conditions," <u>Rheol Acta</u> , Vol. 36, p. 128-134 (1997)
	EJ	Office Action from currently pending Application Serial No. 10/538,540 with mail date 4/6/06
	EK	Response and Amendment from currently pending Application Serial No. 10/538,540 with mail date 10/6/06
	EL	Office Action from currently pending Application Serial No. 10/538,540 with mail date 1/19/07
	EM	Response and Amendment from currently pending Application Serial No. 10/538,540 with mail date 7/19/07
	EN	Office Action from currently pending Application Serial No. 10/539,242 with mail date 7/3/07

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